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Date: March 18, 2002

Sonia V. McVean

PATENT
36856.390

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Masaya WAJIMA et al.

Serial No.: 09/740,913

Filed: December 20, 2000

Title: PIEZOELECTRIC RESONATOR AND PIEZOELECTRIC OSCILLATOR

Art Unit: 2834

Examiner: M. Budd

REQUEST FOR RECONSIDERATION

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Office Action dated November 27, 2001, the period for response to which has been extended to March 27, 2002, by the accompanying Petition for One-Month Extension of Time, please reconsider the above-identified patent application for the reasons set forth in the following paragraphs.

Claims 1-21 are pending in this application.

Claims 1-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kuroda et al. (U.S. 6,215,229), Wajima et al. (U.S. 6,274,968) or Sugiyama et al. (U.S. 6,160,462 in view of Tsuji et al. (U.S. 5,699,027) or Onishi et al. (U.S. 5,459,368) Applicants respectfully traverse this rejection.

Claim 1 recites:

"A piezoelectric resonator comprising:
a piezoelectric resonating element; and
a first exterior substrate and a second exterior substrate laminated

over and under, respectively, on said piezoelectric resonating element;
wherein **each of said first exterior substrate and said second exterior substrate includes a multilayer substrate having at least one layer of an internal electrode**." (Emphasis added)

Claim 11 recites features that are similar to claim 1, including the emphasized features.

The Examiner maintains that Kuroda, Wajima and Sugiyama teach the claimed piezoelectric resonator except for laminated substrates including integral capacitors. However, the Examiner alleges that Tsuji and Onishi teach mounting piezoelectric resonators on substrates provided as laminated layers incorporating circuit elements in an integral construction, and thus concludes that to provide a very compact self contained piezoelectric resonator as shown by Tsuji or Onishi it would have been obvious to one of ordinary skill in the art to use laminated substrates with Kuroda, Wajima or Sugiyama". Applicants respectfully disagree.

Kuroda, Wajima and Sugiyama merely teach conventional piezoelectric resonators having exterior substrates laminated over and under a piezoelectric resonating element. The exterior substrates of Kuroda, Wajima and Sugiyama are defined by a single layer of dielectric or insulating material. Thus, none of Kuroda, Wajima and Sugiyama teach or suggest a first and second exterior substrate that includes a multilayer substrate, let alone " **a multilayer substrate having at least one layer of an internal electrode**" as recited in claims 1 and 11 of the present application.

Contrary to the Examiner's allegation that Onishi and Tsuji teach mounting piezoelectric resonators, neither Onishi nor Tsuji teach or suggest any piezoelectric resonator or mounting structure therefore. Both Onishi and Tsuji teach surface acoustic wave devices, and mounting structures therefore. Thus, Applicants respectfully submit that there would have been no motivation to combine the teachings of Onishi or Tsuji with Kuroda, Wajima or Sugiyama. Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination. In re Geiger, 815 F.2d 686, 2 USPQ 1276, 1278 (Fed. Cir. 1987). Here, the Examiner has failed to establish a prima facie case of obviousness since the references offer no suggestion of the claimed

combination. See In re Nielson, 816 F.2d 1567, 2 USPQ 2d 1525, 1528 (Fed. Cir. 1987).

At best, the Examiner's comments regarding obviousness amount to an assertion that one of ordinary skill in the relevant art would have been able to arrive at Applicant's invention because he had the necessary skills to make a piezoelectric resonator including the features recited in claims 1 and 11 of the present application. This is an inappropriate standard for obviousness. That which is within the capabilities of one skilled in the art is not synonymous with obviousness. See Ex Parte Levengood, 28 USPQ 2d 1300 (Bd. Pat. App. & Inter. 1993). The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification. In re Gordon, 221 USPQ 1125 (Fed. Cir. 1984).

Even assuming *arguendo* that there would have been motivation to combine the teachings of Onishi and Tsuji with Kuroda, Wajima and Sugiyama, the resulting device would still fail to teach or suggest Applicants' claimed invention. Particularly, at best, each of Onishi and Tsuji teaches **a single** multilayer substrate which includes a circuit element disposed therein. Neither Onishi nor Tsuji teach or suggest a first exterior substrate and a second exterior substrate wherein **each** of the first and second exterior substrates includes "**a multilayer substrate having at least one layer of an internal electrode**". Therefore, even if Onishi and Tsuji could properly be combined with Kuroda, Wajima and Sugiyama, the resulting piezoelectric resonator would include **only** one exterior substrate having at least one layer of an internal electrode.

The PTO has the burden under 35 U.S.C. §103 to establish a prima facie case of obviousness. See In re Piasecki, 745 F .2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). The PTO can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. See In re Fine, 837 F .2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1984). This it has not done. The Examiner failed to cite prior art that remedies the deficiencies of

Kuroda, Wajima and Sugiyama or that suggests the obviousness of modifying Kuroda, Wajima and Sugiyama to achieve Applicant's claimed invention.

Instead, the Examiner improperly relied upon hindsight reconstruction of the claimed invention in reaching his obviousness determination. To imbue one of ordinary skill in the art with knowledge of the invention, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher. W.L. Gore & Assoc. v. Garlock, Inc., 721 F .2d 1540, 1543, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Accordingly, Applicants respectfully submit that Kuroda, Wajima, Sugiyama, Onishi and Tsuji, taken individually or in combination, fail to teach or suggest the unique combination and arrangement of elements recited in claims 1 and 11 of the present application.

In view of the foregoing remarks, Applicants respectfully submit that claims 1 and 11 are allowable. Claims 2-10 and 12-21 depend upon claims 1 and 11, respectively, and are therefore allowable for at least the reasons that claims 1 and 11 are allowable.

In view of the foregoing Remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are respectfully solicited.

To the extent necessary, Applicant petitions the Commissioner for a One-month extension of time, extending to March 27, 2002, the period for response to the Office Action dated November 27, 2001.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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